

Practice A

For use with pages 50–56

Rewrite the absolute value equation as two linear equations.

1. $|x + 2| = 7$

2. $|2x - 1| = 5$

3. $|5x + 11| = 6$

4. $|\frac{1}{2}t - 3| = 1$

5. $|5 - t| = 3$

6. $|1 - 4t| = 9$

7. $|5x - 4| = 6$

8. $|3x + 4| = 8$

9. $|2x - 3| = 7$

10. $|3x + 7| = 5$

11. $|x - \frac{1}{2}| = 9$

12. $|2.3 - 5.7x| = 11.4$

Solve the equation.

13. $|x| = 9$

14. $|x| = 25$

15. $|t| = 4$

16. $|x + 3| = 5$

17. $|3x - 2| = 8$

18. $|2x + 6| = 14$

19. $|\frac{1}{2}t - 4| = 1$

20. $|11 - 3t| = 2$

21. $|7t + 3| = 4$

Rewrite the absolute value inequality as a compound inequality.

22. $|x + 7| < 3$

23. $|2x - 4| \leq 10$

24. $|5 - 3x| < 7$

25. $|x - 4| > 5$

26. $|5x + 1| \geq 4$

27. $|2 - x| > 9$

28. $|\frac{1}{3}x - 5| \leq 3$

29. $|2 + 8x| < 9$

30. $|3.5 - 2.1x| \geq 1.5$

31. $|\frac{3}{4}x + 1| \geq 2$

32. $|2.3x - 1.7| < 3.3$

33. $|\frac{2}{3} - \frac{1}{4}x| \leq \frac{5}{4}$

Solve the inequality.

34. $|x| < 8$

35. $|x| > 6$

36. $|x| \leq 3$

37. $|x - 5| < 1$

38. $|3x + 2| \leq 7$

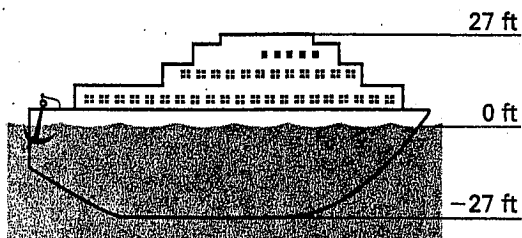
39. $|4 - x| < 5$

40. $|x + 8| \geq 3$

41. $|2x - 1| > 5$

42. $|11 - 3x| > 4$

- 43. Touring a Ship** The diagram below shows the water line of a large ship. The ship extends 27 feet above the water and 27 feet below the water. Suppose you toured the entire ship. Write an absolute value inequality that represents all the distances you could have been from the water line.



- 44. Water Temperature** Most fish can adjust to a change in the water temperature of up to 15°F if the change is not sudden. Suppose a lake trout is living comfortably in water that is 58°F . Write an absolute value inequality that represents the range of temperatures at which the lake trout can survive.

